HIV Incidence Surveillance: Information for Health Care Providers

HIV and AIDS are already reportable. Why is HIV incidence surveillance needed?

Current HIV/AIDS reporting plays a critical role in monitoring the epidemiology and magnitude of the HIV/AIDS epidemic. However, because HIV infection can remain asymptomatic for many years, newly reported cases represent both recent and long-standing infection. Recent advances in testing technology have resulted in assays that are able to identify recent HIV infection (infection within 6 months). Using this technology, HIV incidence data can be generated and provide a more accurate portrayal of populations currently most at risk for acquiring HIV infection. HIV incidence surveillance will allow public health officials to monitor the spread of HIV infection more effectively.

How does HIV incidence surveillance fit with routine HIV/AIDS case surveillance?

HIV incidence surveillance is an extension of the existing reporting system. Massachusetts will use the existing case surveillance infrastructure to collect the information necessary to estimate HIV incidence. Population-based HIV incidence will be estimated from all newly diagnosed HIV cases reported. In addition to data currently collected, HIV incidence surveillance requires data on the individuals' testing history and an aliquot of the remnant blood specimen from the diagnostic HIV test.

How will data for the HIV incidence estimate be obtained?

Three data sources will contribute information needed estimate HIV incidence:

1. Adult case report forms. Information from all newly reported cases in persons aged ≥13 years will be used.

2. Laboratory classification as recent or long-standing infection. Specimens with a positive HIV antibody test will be retested using STARHS (the Serological Testing Algorithm for Recent HIV Seroconversion). A 0.5 ml aliquot of the serum specimen from newly reported cases will be shipped to the CDC STARHS laboratory in New York. These specimens will be obtained from private and public health laboratories when eligibility requirements for STARHS testing are met.

3. HIV testing history. The HIV testing history data of HIV-infected persons will be used for statistical estimation of recent HIV infections in the general population. Testing history will include information on frequency of testing and reason for testing. Currently, testing behavior is not routinely collected, but this information will be integrated into routine HIV surveillance. The standard case report form will be revised.

What is the expectation for my role in HIV incidence surveillance?

As a health care provider you are responsible for routine reporting of HIV diagnostic tests on the standard form. You will be asked for some additional information on the client testing history and exposure to anti-retroviral medications.

How will the laboratory determine if an HIV infection is recent?

The assay currently used for STARHS to distinguish recent from long-standing HIV infection is the "BED HIV-1 Capture EIA". It was developed specifically for this use and is performed on serum specimens. This assay has been approved for "surveillance use only". Results cannot be used for clinical or diagnostic purposes nor returned to providers or patients.

The algorithm to determine recent infection is a two-step process and is based on the principle that after infection, a person's antibody level rises in a predictable way. The first test is a standard diagnostic EIA that is sensitive to low levels of anti-HIV antibody. The second test is less sensitive and can only detect higher levels of antibody. If the standard test and the less sensitive test are both above the detection threshold, the infection may be long-standing. If the standard test is positive and the less sensitive test is below the threshold, the infection is more likely to be recent.

Will I need additional consent from the person being tested and can I talk about HIV incidence surveillance with the patient?

HIV incidence surveillance has been determined to not be research by the duly authorized federal review board. As a result, consent for participation is not required. The Food and Drug Administration (FDA) has ruled that the assay used for STARHS (BED HIV-1 Capture EIA) can be used for surveillance only and cannot be used for clinical or diagnostic purposes. Providers can certainly discuss HIV incidence with clients, but individual results of the STARHS testing cannot be returned to the patient or to the provider.

Where is HIV incidence surveillance being implemented?

HIV incidence surveillance is currently being implemented in 34 states, territories and local areas with confidential HIV testing. Ultimately, HIV incidence surveillance will be standard practice for the entire country.

How will HIV incidence data be used?

HIV incidence data will be useful for:

- Targeting and evaluating HIV prevention services
- Developing new HIV interventions and approaches to prevention
- Allocating resources for HIV prevention programs
- Obtaining federal funds that are distributed based on local statistics
- Calculating a national incidence estimate

Incidence surveillance data will be used for epidemiologic and public health planning purposes only. Data will be presented in aggregate form only. No personal level data is ever released.

How do I obtain more information?

For case report forms, testing history questionnaires, and other information contact the Massachusetts HIV/AIDS Surveillance Program at the Massachusetts Department of Public Health: 617-983-6562**.**